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EXAMINER				
MALLARI, PATRICIA C				
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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/631,304	<b>Applicant(s)</b> ROSS ET AL.	
	<b>Examiner</b> Patricia C. Mallari	<b>Art Unit</b> 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-24 is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/31/03, 5/27/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/22/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the US provisional application No. 60/429,252 and 60/412,155 upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 1-24 of this application. US provisional application No. 60/429,252 describes a "Thrust Brace, Hallway Attachment for Carpet Stretcher Head Screw Drive System" and fails to describe any aspect of a respiratory analyzer. Additionally, the present application and provisional application No. 60/429,252 have no common inventors. While US provisional application No. 60/412,155 describes a fitness monitor that employs a respiratory analyzer, the document fails to disclose the respiratory analyzer as comprising a flow module including housing, a flow meter, a gas sensor, as claimed in claim 1 of the instant application. Provisional application No. 60/412,155 also fails to disclose a first and second ultrasonic transducers for measuring flow rate or a central flow pathway as claimed in claim 13, and fails to disclose a filter module or a wind guard, as claimed in claim 19 of the instant application. Additionally, US provisional application No. 60/400,265 fails to provide adequate support under 35 U.S.C. 112 for claims 10-12 and 19-24 of the instant application because the provisional application lacks adequate description of a pathogen filter.

### *Drawings*

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the

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description: 130 in figure 2C (p.7, lines 17-18). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Election/Restrictions***

Applicant's election without traverse of Group I in the reply filed on 11/3/04 is acknowledged.

#### ***Claim Objections***

Claims 5 and 10 are objected to because of the following informalities:

on line 4 of claim 5, "flow path" should be replaced with "flow pathway";

on lines 1-2 of claim 8, "is adapted to be supported by a strap disposed" should be replaced with "is supported by a strap adapted to be disposed";

on line 4 of claim 10, "subject exhalations" should be replaced with "the subject's exhalations";

on line 9 of claim 10, "flow path" should be replaced with "flow pathway";

on line 10 of claim 10, "flow path" should be replaced with "flow pathway";

on line 11 of claim 10, "flow path" should be replaced with "flow pathway";

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on line 16 of claim 10, "flow path" should be replaced with "flow pathway".

Appropriate correction is required.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 48 of copending Application No. 10/712,760 (herein referred to as Mault '760) in view of US Patent No.

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6,402,698 to Mault (herein referred to as Mault '698). This is a provisional obviousness-type double patenting rejection.

Claim 48 of Mault '760 claims a calorimeter (line 1), which is a type of respiratory analyzer, comprising a flow tube (line 2), or housing enclosing a flow pathway, through which respired gases pass, a flow meter (lines 3-4), and a gas sensor (lines 5-6), wherein a gas concentration is a parameter that is correlated with gas partial pressure. The calorimeter of claim 48 also comprises a computation unit (lines 7-9) coupled to, or in data communication with, the flow meter and oxygen sensor and operable to determine an amount of oxygen consumed by the subject, which is a respiratory parameter. Claim 48 lacks the flow tube, flow meter, and oxygen sensor being groped together as a flow module.

However, Mault '698 teaches a calorimeter comprising a flow module, wherein the flow module includes a flow tube or housing 12a, 12b, 14, 16, a flow meter 64, 70, and a gas sensor 82 (figs. 1 & 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the calorimeter of Mault '698 with that of claim 48 of Mault '760 in order facilitate use of the instrument.

Regarding claim 2 of the instant application, the gas sensor is an oxygen sensor (lines 5 of claim 48 of Mault '760), and the respiratory parameter is a consumed oxygen volume (line 9 of claim 48 of Mault '760).

Regarding claim 3 of the instant application, the flow pathway includes a flow tube partially enclosing a central flow pathway, wherein a flow tube must inherently

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possess a first end portion and a second end portion (lines 2 of claim 48 of Mault '760; also see tube 16 in figs. 1 & 3 of Mault '698).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,402,698 to Mault (herein referred to as Mault '698). Mault '698 teaches a respiratory analyzer comprising a flow module including a housing 12a, 12b, 14, 16 enclosing a flow pathway through which respiration gases pass (fig. 1; col. 3, line 43-col. 4, line 12; col. 4, lines 13-22), a flow meter 64, 72 providing a flow signal correlated with a flow rate of gases through a portion of the flow pathway (fig. 2; col. 4, lines 35-42; col. 5, lines 37-46), and a gas sensor 82 providing a gas sensor signal correlated with a partial pressure of a predetermined gas within the flow pathway (col. 4, line 66-10; col. 5, lines 47-67), wherein gas concentration and gas partial pressure are correlated. A computation module 76 is in data communication with the flow module and determines a respiratory parameter of the user (fig. 1; col. 4, lines 43-65; col. 6, lines 36-53).

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Regarding claim 2, the gas sensor is an oxygen sensor (col. 4, line 66) and the respiratory parameter is a consumed oxygen volume (col. 4, lines 51-56).

Regarding claim 3, the flow pathway includes a flow tube 16 partially enclosing a central flow pathway, the flow tube having a first end and a second end, a first end portion proximate the first end, and a second end portion proximate to the second end (fig. 1; col. 3, line 66-col. 4, line 12).

Regarding claim 8, the flow module is supported by a strap 20, which is adapted to be disposed around a head of the subject (figs. 1 & 3; col. 3, lines 47-52 of Mault '698) and the computation module 76, 94 is adapted to be supported on the torso of the subject, wherein the flow module and computation module are in electrical communication through a cable 102 (fig. 3; col. 6, lines 1-16 of Mault '698). While Mault '698 does not explicitly cite the ability of the computation module 76, 94 to be supported on a subject's torso, the disclosure that the computation module 76, 94 is of a weight and size small enough to be supported by a patient's head in combination with the flow module (fig. 1; col. 6, lines 7-10 of Mault '698) shows that a subject's torso would also be capable of supporting the computation module 76.

Claims 1-3, 8, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,790,178 to Mault et al. (herein referred to as Mault '178).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention



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disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Mault '178 incorporates the entire disclosure of Mault '698 by reference (col. 7, lines 30-35 of Mault '178); therefore, the applicants should refer to the above rejections of claims 1-3 and 8 under 35 U.S.C. 102(b) with regard to Mault '698 as to how the reference Mault '178 anticipates those claims.

With regard to claim 9, the computation module includes a support module 32 in mechanical and electrical communication with a portable computer 10 having a display 22, the support module 32 and the computer 10 cooperating to provide a visual indication of the respiratory parameter on the display 22 of the computer 19 (fig. 2; col. 7, line 62-col. 8, line 1; col. 8, lines 48-55 of Mault '178).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mault '698, as applied to claims 1-3 and 8 above, and further in view of US Patent No. 5,046,491 to Derrick. Mault '698 teaches the flow pathway including a chamber 14 surround the first end portion of the flow tube 16 (fig. 1 of Mault '698), but lacks the chamber and the central flow pathway being in fluid communication through a first

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plurality of apertures disposed in the first end portion of the flow tube. However, Derrick describes an apparatus for capturing a user's respiratory gas comprising a flow pathway including a chamber 42 surrounding a first end portion 60 of a flow tube, wherein the chamber 42 and the pathway communicate through a first plurality of apertures 62 disposed in the first end portion 60 of the flow tube (col. 6, lines 14-22 and lines 62-66; figs. 2 & 3 of Derrick). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the apparatus of Derrick with that of Mault '698 in order to avoid or minimize the contact between the gas collection and transport apparatus and the patient's facial surfaces and to avoid claustrophobic and other undesirable reactions in the patient (col. 6, lines 55-61 of Derrick).

Regarding claims 5-7, a second end portion 60 is surrounded by an atmospheric chamber 42, the chamber 42 and the central flow pathway communicate through a second plurality of apertures 62 in the second end portion 60 of the flow tube (figs. 2 & 3; col. 6, lines 55-61 of Derrick).

With further regard to claims 6 and 7, the flow meter comprises a pair of opposed ultrasonic transducers 64, 70 in ultrasonic communication through gases within the central flow pathway, wherein a first transducer 70 is supported within the first end portion of the tube 16 and the second ultrasonic 64 is supported within the second end portion of the flow tube (figs. 2 & 3; col. 4, lines 35-43; col. 5, lines 36-46; col. 6, lines 28-31 of Mault '698).

With further regard to claim 7, the oxygen sensor 82 is a fluorescence type oxygen sensor (col. 5, lines 47-48 of Mault '698).

***Allowable Subject Matter***

Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13-24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 10-12 and 13-18, the prior art of record fails to teach or fairly suggest a respiratory analyzer comprising a flow tube partially enclosing a central flow pathway, having a chamber surround the first end portion of the flow tube and in fluid communication with the central flow pathway through a first plurality of apertures disposed in the first end portion of the flow tube in combination with a second plurality of apertures in the second end portion of the flow tube through which the central flow path communicates with an atmospheric chamber or with atmospheric gas, as claimed.

With regard to claims 10-12 and 19-24, the prior art of record fails to teach or fairly suggest a wind guard disposed around a second end portion of the flow path and defining an atmospheric chamber substantially surrounding the second end portion of the flow tube, the atmospheric chamber being in fluid communication with the atmosphere through an atmospheric aperture in combination with a chamber surrounding a first end portion of the flow tube that encloses a central flow pathway, the chamber and flow pathway communicating via at least one aperture in the first end of the flow tube, as claimed.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 3,725,658 to Stanley et al.

US Patent No. 4,368,740 to Binder

US Patent No. 4,444,202 to Rubin et al.

US Patent No. 6,379,312 to O'Toole


US Patent No. 6,544,172 to Toeppen-Sprigg

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia C. Mallari whose telephone number is (571) 272-4729. The examiner can normally be reached on Monday-Friday 10:00 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patricia Mallari  
Patent Examiner  
Art Unit 3736



ROBERT L. NASSER  
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